Israel Gannot Ph.D.

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Academic rank: Senior Lecturer, tenured as of November 2001 (At Tel-Aviv University).

A. Education:

1977-1981 B.Sc., Electrical Engineering, Faculty of Electrical Engineering, Technion-The Israeli Institute of Technology, Haifa, Israel.

1987-1989 M.Sc., Bio-Medical Engineering, Faculty of Engineering Tel- Aviv University. Subject of thesis: Plastic hollow fibers for transmitting CO_2 Laser Radiation for Medical Purposes.

1989-1994 Ph.D., Biomedical Engineering, Faculty of Engineering Tel-Aviv University. Subject of the thesis: Investigation of the Flexible Waveguide Transmitting IR Laser Radiation and the Interaction of the Radiation Emerging from the Waveguide with Tissue.

B. Academic and Professional experience:

1981-1987 Israel Defence Forces Medical Corps, Officer, Head of department of the Bio-Medical Instrumentation Research and Development Branch. Rank: Captain (reserve).

1987-1994 Researcher at the fiberoptic laboratory, Department of physical electronics, and teaching assistant in charge of the Electronics Laboratories for students. both at the Faculty of Engineering, Tel-Aviv University.

1994-1997 Post doctoral position, FDA-Center of devices and radiological health, Office of science and technology, Electro-optics branch, with a fellowship by the American academy of sciences-National research council.

1997 – 2001 Lecturer, Department of Biomedical Engineering, Faculty of Engineering, Tel-Aviv University

2001-Present Senior Lecturer (tenured), Department of Biomedical Engineering, Faculty of Engineering, Tel-Aviv University.

2002-present On sabbatical follwed by leave of absence Senior guest scientist, National Institutes of Health, Bethesda, MD, USA.

Guest researcher:

Sept-Oct. 1992:	Guest researcher, Laser-Medizin-Zentrum (LMZ), Freie Universitat, Berlin. F.R. Germany. Thermal and optical properties of flexible waveguides.
Sept.-Oct. 1993	Guest researcher, Laser-Medizin-Zentrum, (LMZ), Freie Universitat Berlin. F.R. Germany. Interaction between laser radiation transmitted by flexible waveguides and tissue.
Spring 1993	Guest researcher, Fiberoptic Materials Research Program, Rutgers State University, Piscataway, New Jersey, U.S.A . The optical properties of fibers for IR laser radiation
July-August 1998	Guest Researcher, Laboratory of Integrative and Medical Biophysics, National Institute of Child Health and Human Development National Institutes of Health, Bethesda Maryland, USA. Subject Biomedical Optical Imaging.
June-October 1999	Guest researcher **,** Laboratory of Integrative and Medical Biophysics, National Institute of Child Health and Human Development National Institutes of Health, Bethesda Maryland, USA. Subject Biomedical Optical Imaging.
June-September 2000	Guest researcher **,** Laboratory of Integrative and Medical Biophysics, National Institute of Child Health and Human Development National Institutes of Health, Bethesda Maryland, USA. Subject: Biomedical Optical Imaging.
June-September 2001	Guest researcher **,** Laboratory of Integrative and Medical Biophysics, National Institute of Child Health and Human Development National Institutes of Health, Bethesda Maryland, USA. Subject Biomedical Optical Imaging.

C. Active participation in scientific meetings.

1. The 6th Meeting in Israel on Optical Engineering Tel-Aviv, December 19-21,1988.
2. Israel physics society meeting Technion, conference proceedings Haifa, March 28-29, 1989.
3. The 7th meeting of optical Engineering in Israel, Tel-Aviv, 12-14 December 1990.
4. American Society for Laser Medicine and Surgery 12th meeting, Orlando, Florida, 17-19 May 1992.
5. The 8th Conference of Optical Engineering in Israel, Tel-Aviv 14-16 December 1992.
6. American Society for Laser Medicine and Surgery, 13th Meeting, New-Orleans, 18-20 April, 1993.

7. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, February 1995.
8. NIH days, National Institute of Health, Bethesda, MD, September 18-22, 1995.
9. The Optical Society of America Meeting, Baltimore, 1995.
10. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, February 1996.
11. Optical Society of America Meeting on Biomedical Optical Spectroscopy and Diagnostics, Orlando, Florida, March 8-22, 1996.
12. American Society for Laser Medicine and Surgery Meeting, Orlando, Florida, April 14-17, 1996.
13. Gordon Conference, Merriden New-Hampshire, June 30-July 5, 1996.
14. LEOS '96, 9th meeting, Boston, MA, November 18-21, 1996.
15. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, February 1997
16. The Israeli Society for Laser Medicine and Surgery, Beer-Sheba, 1998.
17. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, February 1998.
18. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, February 1999.
19. The Inter Institute Woekshop on Optical Imaging, National Institute of Health, Bethesda, Maryland, USA. September 1999.
20. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, January 2000.
21. EBIOS conferense on Endoscopy, fibers, waveguides and sensors, Amsterdam, The Netherland, July 2000.
22. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, January 2001.
23. Gordon Reseach Conference, New-Hampshire, July 2002.
24. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, January 2003.
25. American Society for Lasers Surgery and Medicine, Annaheim, CA, April 2003
26. IEEE/LEOS Annual meeting, Tucson Arizona, 2003.
27. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, January 2004.
28. OSA topical meeting, Miami Beach, FL, April 2004.
29. IEEE symposium on Computer based medical systems, Bethesda MD, July 2004.
30. Biomedical Imaging from Bench to Bedside Workshop, NIH, Bethesda, September 2004.
31. IEEE/LEOS annual meeting, Puerto Rico, November 2004.
32. The international Society for Optical Engineering /Bio-Medical Optics, San-Jose, January 2005.
33. Biomedical Engineering Educational Summit II, Lansdowne, VA, March 3-6, 2005.

D. Fellowships and grants:

1992 Minerva grant (Germany).
1993 1) American Society for Laser Medicine and Surgery grant (U.S.A.), 2) DAAD grant (Germany).
1994 Minerva fellowship (Germany).
1994-7 National Academy of Sciences - National Research Council fellowship (U.S.A.).
1998 1) The Ela Kodesz Research Grant, 2) Tel-Aviv University Research Grant, 3) Keshet foundation, 4) Schlezak foundation for reseach in cardiovascular engineering.
1998-2001 Ministry of Science Strategic research grant (3 years).
1998-2003 Ministry of Industrial affairs Consortium (5 years)
1999 VATAT – The committee for higher education in Israel.
1999-2002 BSF- American Israel Binational Foundation (3 years)
2000 1) Fleischman research grant, 2) Adams Center for Brain Reseach grant.
2000-1 Schlezak foundation for reseach in cardiovascular engineering.
2002-2003 1) The Ela Kodesz Research Grant. 2) TAU internal fund.

E. Professional societies:

AIMBE - American Institute for Medical and Biological Engineering - Fellow
SPIE - The International Society for Optical Engineering - Member
ASLMS - The American Society for Laser Medicine and Surgery – Fellow

F. Students supervision:

Doctorate Students:

1. Dr. Alycia Sagi-Dolev (With Prof. N. Croitoru), (1997-2001) - Wet-Field Laser-Tissue photomechanical interactions using Hollow Waveguides. Graduated.
2. Dr. Avital Garashi (1999-2004) - Development of a minimal invasive method for detection of tumors in biological tissue, based on imaging of exogenous specific fluorescence markers.
3. Dr. Moshe Ben-David (With Prof. Katzir), (1999-2003) - Theoretical and experimental investigation of new generation of Hollow Waveguides for Infrared Radiation. Graduated in 2004.

4. Mr. Alon Goren (2003-) – Transendoscopic thermal imaging of laser tissue interaction within body cavities.
5. Mr. Amit Hammer (2004-) Pharmacokinetics of molecular markers in tissue.

M.Sc. Students:

6. Mr. Gadi Aizenberg (With Dr. Avi Dayan), (1999-2002) – Theoretical Investigation of the thermal effects of CO_2 laser beam-biological tissue interaction in an enclosed space. Graduated in 2002.
7. Mr. Amit Hammer (with Dr. Gadi Fibich) (2001-2004) - Computational model of the movement of fluoreceinated antibodies in the surrounding of tumor. Graduated in 2004
8. Mr. Alon Goren (2001-2003) - Thermal consideration of transendoscopic closed cavity laser ablation of tissue. Graduated in 2003.
9. Mr. Izhar Ron (2001-2004) - Functional imaging of tissue based on fluoresceinated Antibodies specifically attaced to dieseased cell markers. Graduated in 2004.
10. Mr. Ami Pomerantz (With Dr. Bruni Sfez) (2002-2004), Acousto-Optical imaging (Laser –ultrasound combined imaging). Will graduate this academic year.
11. Mr. Michael Vardi (2003-2004) – Calculus fragmantation of calculus in aqueous media through Er-YAG delivering waveguides with sealed caps. Will graduate this academic year.

Projects:

12. Mr. Yalon Bahat (2000) – Labview based program for control of welding system. Graduated.

G. Other activities:

1. Co-Editor IEEE Journal of Selected Topics in Quantum Electronics-Lasers in Medicine and biology (1996-2000).
2. Reviewer of the optical society of America Journal (Applied Optics and Optics Letters).
3. Reviewer of the international society of optical engineering Journals (Optical Engineering, Journal of Biomedical Optics).
4. Reviewer of Lasers in Surgery and Medicine Journal.
5. National Science Foundation (NSF) reviewer.
6. Israeli Ministry of Science programs reviewer.
7. Member of the program committee of the least invasive diagnostics conference BIOS 1999.
8. Member of the Program committee of the Optical Biopsy Conference BIOS 2000.

9. American society for Laser medicine and Surgery-Member of the Research and Development committee.
10. Member of the scientific committee of the Inter-Institute workshop for In Vivo Optical Imaging. National Institute of Health. 1999
11. Chairman EBIOS conferense on Endoscopy, fibers, waveguides and sensors, July 2000.
12. Member of the scientific committee of the Inter-Institute workshop for In Vivo Optical Imaging. National Institute of Health. September 2000
13. Chairman BIOS conference on fibers, waveguides and sensors, San-Jose 2001.
14. Member of the scientific committee of the special symposium on Lasers in Medicine and Biology/IEEE-LEOS annual meeting 2001
15. Member of the program committee of the least invasive diagnostics conference BIOS 2002, CA. USA.
16. Chairman BIOS conference on fibers, waveguides and sensors, San-Jose 2002.
17. Member of the IEEE-LEOS 2002 Program Committee, Glasgow, Scotland, November 2002.
18. Member of the scientific committee of the Inter-Institute workshop for In Vivo Optical Imaging. National Institute of Health. September 2002.
19. Nominated the Chairman of the BIOS conference on fibers, waveguides and sensors, San-Jose 2003.
20. Chair of the IEEE/LEOS committee on Lasers in Medicine and Biology (Nominated on October 2002)
21. Member of the SPIE symposia committee (nominated October 2002)
22. Member of the SPIE nominating committee (nominated October 2002)
23. Chair of the symposia on lasers in medicine and biology as part of IEEE/LEOS annual meeting , 2003, Tucson, Arizona.
24. Chair of the BIOS conference on fibers, waveguides and sensors, San-Jose 2004.
25. Co-Coordinator of the Inter-Institute workshop for *In Vivo* Optical Imaging from Bench to Bedside, National Institute of Health. September 2004.
26. Chair of the symposia on lasers in medicine and biology as part of IEEE/LEOS annual meeting, Rio-Grande, Puerto Rico, November 2004.
27. Co-Editor, Journal of Biomedical optics, Special issue on *In Vivo* Optical Imaging from Bench to Bedside, 2004.
28. Chair of the BIOS conference on optical fibers and sensors for medical applications, San-Jose 2005.
29. Co-Chair of the Molecular Imaging Workshop, BIOS San-Jose January 2005.
30. Member of the Biophotonics scientific committee, CLEO-Europe, June 2005.

H. Courses:

1. Lasers and optics in medicine- Graduate course.
2. Optical diagnostic methods in Medicine –Graduate course.
3. Lasers Applications in Medicine – Under Graduate Course.
4. Medical Informatics- Graduate course.
5. Laser Tissue Interactions- Graduate course.

I. Publications:

Papers:

1. J. Dror, I. Gannot and N. Croitoru "Hollow tubes for transmitting IR laser energy for surgery applications" Israel Journal of Technology, Vol 24, pages 599-610, 1988.
2. I. Kaplan, S. Giler, J. Dror, I. Gannot and N. Croitoru "Preliminary experiments of possible uses in medicine of novel plastic hollow fibers for transmission of CO_2 radiation" Lasers in Surgery and Medicine, Vol 10, pages 291-294, 1990.
3. N. Croitoru, J. Dror and I. Gannot "Characterization of hollow plastic fibers for the transmission of infra-red radiation" Applied Optics, Vol 29, pages 1805-1809, 1990.
4. N. Croitoru, J. Dror, I. Gannot, R. Dahan and S. Calderon "Hollow Fibers for Mid Infrared and Applications in Medicine" Romanian Physics Review, Vol. 36, pages 667-673, 1991.
5. O. Mor-Haim, D. Mendlovic, I. Gannot, J. Dror and N. Croitoru "Ray model for transmission of IR radiation through multi bent cylindrical waveguides" Optical engineering, vol 30, pp 1886- 1891, 1991.
6. I. Kaplan, S. Giler, J. Dror, I. Gannot and N. Croitoru, "Experimental Surgery on Dog's Stomach and Liver using CO_2 Laser Plastic Hollow Fibers: Technical Method" Journal of Clinical Laser Medicine & Surgery. Vol 10, pp 115-118, 1992.
7. S. Brener, I. Gannot and N. Croitoru "Laser Tissue Interaction", Skin Update, The Israel Dermatological Society, pages 16-22, no. 9, October 1993.
8. I. Gannot, J. Dror, N. Croitoru, I. Kaplan and S. Calderon, "Flexible Waveguides for IR Laser Radiation Transmission for Surgery Applications" Laser Medicine and Surgery, Vol. 14, no. 2, pp. 184-189, 1994.
9. I. Gannot, S. Calderon, T. Ertl, S. Schründer, J. Tschepe, J. Dror, G. Müller and N. Croitoru, "In-vitro Experimental Study of Er-YAG and CO_2 Lasers in Implant Exposure", Lasermedizin, Vol. 10 pp 165-168, 1994.
10. S. Calderon, I. Gannot, G. Gal and N. Croitoru, "The Use of Flexible Hollow Waveguides for CO_2 Laser Transmission in Oral and Maxillo-Facial Surgery", Realites Cliniques, Vol. 5, pp 293-300, 1994.
11. I. Gannot, M. Alaluf, J. Dror, J. Tschepe, G. Müller and N. Croitoru, "Thermal effects due to interaction of IR Radiation with guiding films of hollow waveguides" Optical Engineering, Vol. 34, pp 612-615, 1995.
12. I. Gannot, S. Schründer, J. Dror, A. Inberg, T. Ertl, J. Tschepe, G. Müller and N. Croitoru, "Flexible waveguides for Er-YAG laser radiation delivery, IEEE-Transactions on Biomedical Engineering, Vol. 42, No. 10, pp 967-972, October 1995.
13. A.H. Gandjbakhche and I. Gannot, "Flourescence imaging of specific markers of disease applying random walk theory.", IEEE-Journal of Selected Topics in Quantum Electronics, Vol. 2 no. 4, pp. 914-921, December 1996.
14. I. Gannot, A. Inberg, M. Oxman, N. Croitoru and R. W. Waynant, “Current status of flexible waveguides for infrared laser radiation transmission”, IEEE-Journal of Selected Topics in Quantum Electronics, pp. 880-889, December 1996

15. I. Gannot, A. Inberg, N. Croitoru and R. W. Waynant, "Flexible Waveguides for Free Electron Laser Radiation Transmission", Applied Optics, Vol. 36, No. 25, pp 6289-6293, September 1997.
16. I. Gannot, A.H. Gandjbakhche, G. Gannot, P.C. Fox, and R.F. Bonner, "Optical Simulations Experiments for Development of a Non-invasive Technique for the Diagnosis of Diseased Salivary Glands *in situ* ",Medical Physics, Vol. 27, no. 7 pp 1139-144, 1998.
17. V. Chermomordik, D. Hattery, I. Gannot and A. H. Gandjbakhche, "Inverse Method 3-D Reconstruction of Localized in vivo Fluorescence-Application to Sjogren's Syndrome", IEEE-Journal of Selected Topics in Quantum Electronics, pp. 930-935, July/August 1999.
18. A. M. Sagi-Dolev, G. R. Harris, R. W. Waynant and I. Gannot, "Laser Inbduced Acoustic Stresses Under Submerged Biological Membranes", pp 1027-1031, IEEE-Journal of Selected Topics in Quantum Electronics, pp. 930-935, July/August 1999.
19. M. Ben David, A. Inberg, I. Gannot N. Croitoru, The effect of scattering on the Transmission of Infrared Radiation Through Hollow, Waveguides", Journal of Optoelectronics and Advanced Materials, pp 23-30, September 1999.
20. R. Waynant, I. Ilev and I. Gannot, "Mid IR Medical Applications", The Royal Society Philosophical Transactions: Mathematical, Physical and Engineering Sciences, 359 (1780): 635-644, March, 2001.
21. D. Hattery, V. Chernomordik, M. Loew, I. Gannot, and A. Gandjbakhche, "Analytical Solutions for Time-Resolved Fluorescence Lifetime Imaging in Turbid Media Such as Tissue", Journal of the Optical Society of America A, Volume 18, Issue 7, 1523-1530, July 2001.
22. I. Gannot, M. Ben-David, A. Inberg and N. Croitoru., "Broadband omnidirectional IR flexible waveguides, Journal of Optoelectronics and Advanced Materials, Vol. 3, No. 4, pp 933-935, December 2001.
23. I. Gannot, M. Ben David, N. Croitoru, A. Inberg, M. Oksman, R. Waynant, "Beam Shape analysis of waveguide delivered IR lasers", Journal of Optical Engineering, Volume 41, Issue 1, pp. 244-250, January 2002.
24. I. Gannot, G. Gannot, A. Garashi, A. Gandjbakhche, A. Buchner and Y. Keisari. "Laser activated fluorescence measurements and morphological features-An in *vivo* study of clearance time of FITC tagged cell markers", Journal of Biomedical Optics, Volume 7, Issue 1, pp. 14-19, January 2002.
25. I. Gannot, A. Langus and C. Fuchs, "Subjects' dissimilarity in the analysis of laser-tissue dose -response experiments: a potential cause for puzzling results", Lasers in Medical Sciences, 17, 13-18, March 2002.
26. G. Gannot, I. Gannot, A. Buchner, H. Vered and Y. Keisari, "Increase in immune cell infiltration with progression of oral epithelium from hyperkeratosis to dysplasia and carcinoma, , British Journal of Cancer Vol. 86, no. 9, pp 1444-1448, May 2002.
27. V. Chernomordik, D. W. Hattery, I. Gannot, G. Zaccanti and A. Gandjbakhche, "Analytical Calculation of the Mean Time Spent by Photons inside an Absorptive Inclusion Embedded in a Highly Scattering Medium", J Biomed Opt.;Vol. 7 no. 3: pp: 486-92, July 2002.

28. I. Gannot, A. Garashi, G. Gannot, V. Chernomordik and A. Gandjbakhche, Quantitative 3-D imaging of tumor labeled with exogenous specific fluorescence markers, Applied Optics, Vol. 42 no. 15. pp 3073-3080, June 2003.
29. A. H. Gandjbakhche, V. Chernomordik, D. Hattery, M. Hassan and I. Gannot, "Tissue Characterization by Quantitative Optical Imaging Methods",Volume 2 Issue Number 6, December 2003
30. I. Gannot, A. Garashi, V. Chernomordik and A. Gandjbakhche, "Quantitative optical imaging of pharmacokinetics of specific fluorescent tumor markers through turbid media such as tissue, Optics letters, Volume 29, Issue 7, pp. 742-744, April 2004.
31. N. Croitoru**,** A. Inberg, M. Ben-David and I. Gannot, "Broad Band and Low Loss Mid-IR Flexible Hollow Waveguides", Optics Express, Vol. 12, No. 7, pp 1341-1352 April 5, 2004.
32. V. Gopel, JA Harrington, A. Goren and I. Gannot, Coherent, hollow-core waveguide bundles for infrared imaging, optical Engineering, Vol. 43 no. 5 pp 1195-1199 May 2004.
33. A. Dayan, A. Goren and I. Gannot, "Theoretical and experimental investigation of the thermal effects within body cavities during transendoscopical CO_2 laser-based surgery", Lasers Surgery and Medicine, VOL. 35, Issue 1, pp 18-27, July 2004.
34. I. Gannot, R. Izhar, F. Hekmat, V. Chernomordik and A. Gandjbakhche, "Functional optical detection based on pH dependent fluorescence lifetime", Journal of Lasers in Medicine and Surgery, VOL. 35, Issue, 5, pp 342-348, 2004
35. I. Gannot, M. Ben-David, I. Ilev and R. Waynant, Pulse dispersion in hollow optical waveguides, accepted for publication in Optical Engineering, March, 2005.
36. G. Fibich , A. Hammer, G. Gannot, A. Gandjbakhche and I. Gannot, "Modeling and Simulations of the Pharmacokinetics of Fluorophore conjugated Antibodies in tumor vicinity for the optimization of fluorescence based optical imaging, Submitted to the Journal of Lasers in Medicine and Surgery, February, 2005.

Book chapters:

1. I. Gannot, and Moshe Ben-David, "Fiberoptic Delivery systems", Encyclopedia of Optical Engineering, Invited chapter.
2. I. Gannot and Moshe Ben-David, "Optical Fibers and Waveguides for Medical Applications", Biomedical Photonics handbook", CRC press, 2003, Chapter 7, pages 7.1-7.22, Invited chapter.
3. M. Hassan, V. Chernomordik, A. Vogel, D. Hattery, I. Gannot, R. Yarchoan and Amir H. Gandjbakhche, Infrared imaging for tissue characterization and function, The Biomedical Engineering Handbook, Third edition, CRC and IEEE press, 2004.
4. I. Gannot and I. Ilev, ""Fiber Optic Sensors" Encyclopedia of Biomaterials and Biomedical Engineering, published by Marcel Dekker Invited chapter, February 2005.

Proceedings book editor:

1. I. Gannot, Y. V. Gulyaev, T. G. Papazoglou and C. F. P. Van Swol, Biomonitoring and Endoscopy Technologies, Progress in Biomedical Optics and Imaging, Vol. 1 No. 29, 2000.
2. I. Gannot, Optical Fibers and Sensors for Medical Applications I, Vol. 4253, 2001.
3. I. Gannot, Optical Fibers and Sensors for Medical Applications II, Vol 4616, 2002.
4. I. Gannot, Optical Fibers and Sensors for Medical Applications III, Vol 4957, 2003.
5. I. Gannot, Optical Fibers and Sensors for Medical Applications IV, Vol 5317, 2004.
6. I. Gannot, Optical Fibers and Sensors for Medical Applications V, Vol 5691, 2005.

J. Conference Proceedings:

1. J. Dror, I. Gannot, O. Mor-Haim, D. Mendlovic and N. Croitoru "CO_2 laser radiation transmission through curved hollow fibers", The sixth Meeting in Israel on Optical Engineering Tel-Aviv, December 19-21,1988.
2. J. Dror, I. Gannot and N. Croitoru "Hollow tubes for transmitting IR laser energy for surgery application" SPIE OE/LASE '89, Los-Angeles, January 15-20, 1989.
3. I. Kaplan, S. Giler, J. Dror, I. Gannot and N. Croitoru "Application of plastic hollow fibers in CO2 laser surgery", vol 1067 pages 260-263 SPIE OE/LASE '89, Los-Angeles, January 15-20, 1989.
4. J. Dror, D. Mendlovic, I. Gannot and N. Croitoru "Hollow plastic waveguides for CO_2 laser energy transmission" Israel physics society meeting Technion, conference proceedings Haifa, March 28-29, 1989.
5. I. Gannot, J. Dror and N. Croitoru "Hollow plastic fibers for CO_2 laser surgery-characterization and modelling" 9th. conf. of the American society of laser in medicine and surgery, vol 9 suppl 1 page 33, Arlington, Virginia, April 15-17, 1989.
6. N. Croitoru, J. Dror I. Gannot and L. Arcan "Characterization of plastic hollow fibers for transmitting CO_2 laser radiation for medical use" The international congress on optical science and engineering, conference proceedings 6 pages, The Hauge Nederland, March, 12-16 1990.
7. A.Y. Kaufman, I. Gannot, J. Dror and N. Croitoru "Stainless steel needles as hollow waveguides for CO_2 laser radiation transmission and endodontic treatment experiments" 10th conf. of the American Society of Laser in Medicine and Surgery, Nashville Tennessee, April 6-8 1990.
8. A.Y. Kaufman, I. Gannot, J. Dror and N. Croitoru "Thin hollow waveguides for CO_2 laser radiation transmission used for endodontic treatment" 2nd Congress in low power laser in Medicine, Tokyo, september 1990
9. I. Kaplan, S. Calderon, I. Gannot, J. Dror and N. Croitoru, "Clinical application of flexible plastic waveguides for the CO_2 laser power transmission" 5th. Int. Congress

of the European Laser Association, conference proceedings, Graz, Austria, 8-11 November 1990.

10. I. Gannot, J. Dror, R. Dahan, M. Alaluf, and N. Croitoru "Characterization and uses of plastic hollow fibers for CO_2 laser energy transmission" The 7th meeting of optical Engineering in Israel, conference proceedings, Tel-Aviv, 12-14 December 1990.
11. R. Dahan, J. Dror, I. Gannot, and N. Croitoru "Structure analysis of the deposited mettalic and dielectric layers in plastic hollow fibers" 5th Israel materials engineering conference IMEC-V, conference proceedings, Haifa 19-20 December 1990.
12. S. Calderon, I. Gannot, J. Dror and N. Croitoru "Plastic hollow fibers employed for CO_2 laser power transmission in oral surgery", SPIE Biomedical Optics, vol 1420 pages 108-115, Los- Angeles, U.S.A. 20-25 January 1991.
13. D. Kempler, I. Gannot R. Dahan, J. Dror and N. Croitoru "CO_2 laser radiation transmitted through a flexible hollow fiber: effects on human enamel" IADAR/AADR Conference Acapulco, Mexico April 17-21 1991.
14. N. Croitoru, I. Kaplan, S. Calderon, I. Gannot and J. Dror, "Clinical Applications of Flexible Plastic Waveguides for the CO_2 Laser Power Radiation" Laser '91, conference proceedings pages 7- 10, Munchen, Germany, 13-14 June, 1991.
15. S. Calderon, I. Gannot, J. Dror and N. Croitoru, "Clinical Uses of the Plastic Hollow Fibers for CO_2 Laser Radiation Transmission in Oral and Maxillo-Facial Surgery" Congress of the International Society for Laser Medicine and Surgery, Anneheim, California, October 1991.
16. S. Calderon, I. Gannot, J. Dror, and N. Croitoru "Clinical uses of plastic hollow fibers for CO_2 laser radiation transmission in oral and Maxillo-facial surgery" SPIE OE/LASE Los-Angeles, California, 19-25 January 1992.
17. I. Gannot, J. Dror, R. Dahan and N. Croitoru "Improved plastic hollow fibers for CO_2 laser radiation transmission for possible endoscopic uses" SPIE OE/LASE vol 1649 pages 24-33, Los-Angeles, California 19-25 January 1992.
18. I. Gannot, J. Dror, N. Croitoru,I. Kaplan, S. Calderon. Flexible waveguides for IR laser radiation transmission for surgery applications" American Society for Laser Medicine and Surgery, vol 12 suppl. 4 page 42, 12th meeting, Orlando, Florida, 17-19 May 1992.
19. N. Croitoru, I. Gannot, J. Dror, I. Kaplan and S. Calderon, "Clinical Applications of the Flexible Plastic Hollow Waveguides" The German Society for Laser Medicine and Surgery, conference proceedings, Munster, Germany, 17-19 November 1992.
20. I. Gannot, J. Dror, N. Croitoru,I. Kaplan, S. Calderon. "Medical Applications of Plastic Hollow Waveguides" The 8th Conference of Optical Engineering in Israel, conference proceedings, Tel- Aviv 14-16 December, 1992.
21. N. Croitoru, I. Gannot, J. Dror, A. Imber, I. Kaplan and S. Calderon, "Flexible Waveguides for Transmission of IR Radiation and Surgical Applications" SPIE Bio-Medical Optics, vol 1893 122-127, Los-Angeles, California, 19-25 January 1993.
22. I. Gannot, S. Schründer, T. Ertl, J. Tschepe, J. Dror, G. Müller and N. Croitoru, "Flexible Waveguides for The Delivery of High Power Er-YAG Laser Radiation" SPIE Bio-Medical Optics, vol 1893 pages 188-194 Los-Angeles, California, 19-25 January, 1993.

23. I. Gannot, S. Schründer, T. Ertl, J. Tschepe, J. Dror, G. Mülller and N. Croitoru "Multi-Wavelength Flexible Waveguides" American Society for Laser Medicine and Surgery, vol 13 suppl. 5 page 119, 13th Meeting, New-Orleans, 18-20 April, 1993.
24. I. Gannot, S. Schrülnder, J. Tschepe, J. Dror, T. Ertl, G. Müller and N. Croitoru, Flexible WAveguides for Er-YAG Laser Radiation Transmission" Laser '93, Munich, 22-26 June, 1993.
25. I. Gannot, S. Schrunder, J. Tschepe, T. Ertl, J. Dror, G. Müller and N. Croitoru, Er-YAG Laser Flexible Waveguides" International Symposium on Bio-Medical Optics Europe '93, vol 2084, pages 1-3, Budapest, Hungary, September, 1993.
26. I. Gannot, J. Dror, T. Abel, J. Harrington and N. Croitoru, Optical Characterisation of Flexible Plastic Hollow Waveguides for CO2 Laser Delivery, International Symposium on Bio-Medical Optics Europe '93, vol 2084, pages 66-73, Budapest, Hungary, 1-3 September, 1993.
27. I. Gannot , J. Tschepe, J. Dror, G. Müller and N. Croitoru, "Thermal measurements of flexible plastic hollow waveguides" International Symposium on Bio-Medical Optics Europe '93, vol 2084, pages 59-65, , Budapest, Hungary, 1-3 September, 1993.
28. I. Gannot, J. Dror, A. Inberg, N. Croitoru, S. Schründer, J. Tschepe and G. Mülller , "Flexible Plastic Waveguides Suitable for Large Interval of the Infrared Radiation Spectrum", SPIE/Biomedical Optics January 1994.
29. I. Gannot, J. Tschepe, S. Schründer, J. Dror, G. Müller and N. Croitoru, "Pulsed Lasers Transmission by the Flexible Waveguides", Europto, Lille, France, September 1994.
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